



United States
Department of
Agriculture

Forest
Service

Arizona Zone
Entomology and
Pathology

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Subject: Aspen Defoliation on the San Francisco Peaks and Kendrick Mountain.

To: Forest Supervisors, Coconino and Kaibab National Forests

Earlier this month, many aspen clones on the west side of the San Francisco Peaks were late to foliate (produce foliage) but had green buds that were starting to flush. A few weeks ago, there was a snowstorm and shortly after it was apparent large groups of aspen were defoliating, as many clones were digressing or never greened up at all. Frost was found to be the primary reason for the defoliation.

Since aspen grows in clones or groups that are genetically similar, within these clones they tend to produce and drop their leaves at approximately the same time. The young leaves of the clones that were late to foliate were vulnerable to the cold temperatures, froze and dropped off the trees. The mature leaves of other clones had hardened and were protected from the cold temperatures. Green buds can be seen on the defoliating trees, but it will take a few weeks before the affected aspens start to look green again. Upon further examination we found frost damaged aspen clones on the west, north and east side of the San Francisco Peaks and on Kendrick Mountain. We have heard there are affected aspen in the inner basin as well.

To add to this story, there is an insect known as the large aspen tortrix, *Choristoneura conflictana*, which started to defoliate aspen trees with mature leaves within the past few weeks. Again, not all clones are affected. The larva produces silken threads and webs three or four leaves together and feeds inside. These leaves drop off the trees green which distinguish them from frost damaged leaves which are brown to black in color. The early spring precipitation we received is known to favor this insect.

Since aspen is a deciduous tree, we normally expect it to recover from frost damage or tortrix activity. However, we are unclear at this time if some clones will be defoliated twice in one growing season from both frost and large aspen tortrix activity. We will further monitor this incident through our aerial detection program. Steve Dudley will be flying these areas in August.

If you have any questions please contact me at (520)556-2075.

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